



## UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,193	06/21/2007	Jurgen Gaydou	BOE01 082	6942
39290	7590	11/10/2010	EXAMINER	
DUANE MORRIS LLP - DC			KOEHLER, CHRISTOPHER M	
505 9th Street			ART UNIT	PAPER NUMBER
Suite 1000			3726	
WASHINGTON, DC 20004-2166				
MAIL DATE		DELIVERY MODE		
11/10/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/590,193	<b>Applicant(s)</b> GAYDOUL, JURGEN
	<b>Examiner</b> Christopher M. Koehler	<b>Art Unit</b> 3726

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 20 October 2010.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-18 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 16 October 2009 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement (PTO/US/06)  
 Paper No(s)/Mail Date 8/26/2010
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date: \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 5 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Gaydoul (US Patent No. 5,502,881).

#### *Claim 1:*

Gaydoul teaches an apparatus for descaling hot rolled stock (7, figure 3, abstract), being moved (F) with respect to the apparatus (8), by spraying it with high pressure water (abstract), comprising at least one row of nozzle heads (20) sweeping across the width of the rolled stock with a plurality of nozzle heads (figure 3), each nozzle head being motor-driven in rotation about an axis of rotation (A) (col. 4, lines 1-9) substantially perpendicular to the surface of the rolled stock (figure 3) and comprising at least two nozzles (21, figure 4) which are disposed eccentrically (figure 7) with respect to the axis of rotation (A), the nozzles of each nozzle head being arranged as closely as structurally possible to the circumference of the nozzle head (figure 7), whereby a spray pattern (figures 6 and 8) is created on the surface of the rolled stock in a way to touch or overlap (figure 8) the spray pattern of the adjacent nozzle head in the row of nozzle heads, and all of the nozzles having a substantially uniform spray (figure 4) and being arranged in the nozzle head radially inclined outwardly at an angle of inclination (a) in

the range of 0° 0~ 20° (figure 9, angle alpha, col. 3, lines 60-67), and inclined in circumferential direction (f,f) in the forward direction of the rotation of the nozzle head (see figure 4 where it is clearly illustrated that the nozzle is inclined so as to spray at an angle to the left of the axis of the nozzle head in the forward direction of rotation in addition to being angled radially outwardly).

Claim 2:

Gaydoul teaches that the angle of radial inclination (alpha) is in the range of 0 to 30 degrees (col. 3, lines 60-67) and in one specific embodiment is 15 degrees (col. 5, lines 63-67)

Claims 5 and 10:

Gaydoul teaches that the jet opening angle of the jet exiting from the nozzles is 0 to 15 degrees (figure 5).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 6-8, 11 and 15-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaydoul.

Claims 6, 7, 17 and 18:

Gaydoul teaches two embodiments having 4 and 2 nozzles mounted evenly distributed on the nozzle head (figures 4, 10 and 11) but does not explicitly teach that

the nozzle head has 6 or 8 nozzles evenly distributed on the nozzle head. The disclosure implies that the number of nozzles is selected based on the characteristics of the material to be sprayed. At the time of the invention it would have been an obvious matter of design choice to one of ordinary skill, to have used 6 or 8 nozzles because applicant has not disclosed that the additional nozzles provide an advantage or solve a stated problem not met by 2 or 4 nozzles. One of ordinary skill in the art, furthermore, would have expected applicant's invention to perform equally well with either the number of nozzles taught by Gaydoul or the claimed number of nozzles because both perform the same function of removing scale equally well. Therefore, it would have been an obvious matter of design choice to modify Gaydoul to obtain the invention specified in claims 6, 7, 17 and 18.

Claim 8:

Gaydoul teaches an apparatus for descaling hot rolled stock (7, figure 3, abstract), being moved (F) with respect to the apparatus (8), by spraying it with high pressure water (abstract), comprising at least one row of nozzle heads (20) sweeping across the width of the rolled stock with a plurality of nozzle heads (figure 3), each nozzle head being motor-driven in rotation about an axis of rotation (A) (col. 4, lines 1-9) substantially perpendicular to the surface of the rolled stock (figure 3) and comprising at least two nozzles (21, figure 4) which are disposed eccentrically (figure 7) with respect to the axis of rotation (A), the nozzles of each nozzle head being arranged as closely as structurally possible to the circumference of the nozzle head (figure 7), whereby a spray pattern (figures 6 and 8) is created on the surface of the rolled stock in a way to touch or

overlap (figure 8) the spray pattern of the adjacent nozzle head in the row of nozzle heads, and all of the nozzles having a substantially uniform spray (figure 4) and being arranged in the nozzle head radially inclined outwardly at an angle of inclination (a) in the range of 0° 0~ 20° (figure 9, angle alpha, col. 3, lines 60-67), and inclined in circumferential direction (f,f) of the rotation of the nozzle head (see figure 4 where it is clearly illustrated that the nozzle is inclined so as to spray at an angle to the left of the axis of the nozzle head in the forward direction of rotation in addition to being angled radially outwardly and col. 5, lines 4 and 5). Gaydoul does not explicitly teach that pairs or groups of nozzle heads are adapted to be switched off or on in correspondence with different widths of rolled stock.

Applicant Admitted Prior Art (AAPA) (see MPEP 2144.03) teaches that it is well known in the art of descaling apparatuses to descale varying widths of rolled stock and that in doing so nozzles are switched on or off depending on the width of the rolled stock being processed. It would have been obvious to one of ordinary skill in the art at the time of the invention to have switched on nozzles that are over the rolled stock and switch off nozzles that have no rolled stock between them for several reasons including the conservation of the descaling fluid and the prevention of undue wear on the nozzle heads caused by opposing nozzle heads spraying high pressure fluid against each other with no rolled stock therebetween.

Claim 16:

See rejections of claim 10 above.

Claims 11 and 15:

See rejections of claims 2 and 5 above.

5. Claims 3, 9, 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaydoul in view of Petsch (US Patent No. 3,829,019).

Claims 3, 9, 12 and 13:

Gaydoul teaches the invention claimed but does not explicitly teach that the angle of inclination of the nozzles in the circumferential direction is between 0 and 30 degrees, or more specifically 15+/-2 degrees.

Petsch teaches that the angle of inclination the nozzles (81, 82) in the circumferential direction is 15 degrees (figure 9, col. 5, lines 4-28). It would have been obvious to one of ordinary skill in the art at the time of the invention to have looked to Petsch for an appropriate measure of the angle of inclination in the circumferential direction shown in figure 4 of Gaydoul but not explicitly described in the specification. In other words, one of ordinary skill in the art at the time of the invention would recognize that figure 4 of Gaydoul teaches angle the nozzles in the radial direction and in the forward circumferential direction and Gaydoul teaches that the angle in the radial direction is between 0 and 30 degrees (col. 3, lines 65-67) but Gaydoul does not explicitly teach the measurement of angle in the circumferential direction; accordingly one of ordinary skill in the art would have sought similar spraying nozzles having angular orientations in the circumferential direction to ascertain a preferred angle of inclination; Petsch, being analogous spraying device teaches such a nozzle and that the preferred angle of inclination is 15 degrees; thus, one of ordinary skill in the art would have found it obvious to apply the angle of Petsch to the nozzle of Gaydoul.

6. Claims 4 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gaydoul in view of Hiroshi et al. (JP 11-216513).

Claims 4 and 14:

Gaydoul teaches the invention claimed but does not explicitly teach that adjacent nozzle heads in the row of nozzle heads are driven to rotate in opposite directions with respect to one another.

Hiroshi teaches steel descaling nozzle heads and nozzles wherein the nozzle heads (2) are placed adjacent to one another (figures a and b) and the row of nozzle heads are driven to rotate in opposite directions with respect to one another (figure b). It would have been obvious to one of ordinary skill in the art at the time of the invention to have applied the rotation teaching of Hiroshi to the apparatus of Gaydoul since the counter rotation of adjacent heads results in a more efficient and uniform descaling between the heads by preventing the interference of high pressure water between the heads (see Hiroshi "Problem to be Solved").

***Response to Arguments***

7. Applicant's arguments filed 8/20/2010 have been fully considered but they are not persuasive as to the anticipation rejection in view of Gaydoul.
8. Applicant's arguments with respect to the obviousness of claims 1 and 8 in light of Gaydoul in view of Petsch, specifically that Petsch fails to teach that the angle of inclination of the all of the nozzles is not in the forward circumferential direction as required by the amendment, have been fully considered and are persuasive. However,

the examiner has provided a new grounds of rejection for claims 3, 9, 11 and 12 under Gaydoul in view of Petsch.

9. Applicant argues that the amendment to claims 1 and 8 was made in response to the examiner's admission that figure 4 does not show that all of the nozzles are inclined in the same direction in the forward direction of rotation. The examiner has never been of the opinion, nor made it a matter of record, that figure 4 does not show all of the nozzles inclined in the forward direction of rotation. Accordingly, the examiner has maintained the position that all of the nozzles are inclined in the same direction and that claims 1 and 8 are anticipated thereby.

10. Applicant alleges that the examiner did not fully address applicant's arguments filed 4/22/2010, specifically that the restriction on the use of patent drawings applies not only to exact measurements, as asserted by the examiner, but also applies to relative dimensions. The examiner explicitly replied to applicant's improper reading of MPEP 2125, *In re Olson*, and *Ex Parte Frenk* as follows:

- a. Applicant argues that it is improper for the examiner to rely solely on figure 4 of Gaydoul for the basis of his rejection as to the presence of an angle of inclination in the circumferential direction in the forward direction of the rotation of the nozzle head as asserted in the final office action. Applicant cites the examiner to MPEP 2125 for the proposition that "when the reference does not disclose that the drawings are to scale and is silent as to dimensions, arguments based on measurement of the drawing features are of little value." MPEP 2125. This is because "ordinarily drawings which accompany an application for a patent

are merely illustrative of the principles embodied in the alleged invention claimed therein and do not define the precise proportions of elements relied upon to endow the claims with patentability." *In re Olson*, 212 F.2d 590, 592 (CCPA 1954). This restriction on the use of patent drawings applies not only to measurements but also applies to relative dimensions such as comparing the pitches of a screw. See *Ex Parte Frenk*, 2009 WL1763974 (Bd. Pat. App. & Interfer.). Applicant also argues that his position is supported by the inconsistencies of the other figures of Gaydoul with the examiners interpretation of figure 4. Finally, applicant argues that there is no written description that the nozzles are inclined in the circumferential direction and without that, the examiner's interpretation of a perspective view of a patent figure as showing nozzles that are inclined both radially and circumferentially is improper.

b. Regarding applicant's arguments to the impropriety of the examiner's rejection with respect to MPEP 2125, the examiner respectfully maintains that applicant has mischaracterized MPEP 2125 and that if MPEP 2125 were applicable to the examiner's rejection in light of figure 4 of Gaydoul it would support the examiner's rejection not oppose it. The examiner has not relied on figure 4 for the dimension, measurement, precise proportions or other measurable quantity; rather the examiner relies on figure 4 to support the existence of a (any) angle of inclination in the forward circumferential direction as clearly shown. Were the examiner to assert, for example, that the angle is Y degrees as shown in figure X, the rejection would be improper under MPEP 2125

because it would be a measurement of a quantity (angle, dimension, etc.).

However, such is not the case here.

c. Furthermore, MPEP 2125 explicitly states “drawings in a design patent can anticipate or make obvious the claimed invention as can drawings in utility patents. When the reference is a utility patent, it does not matter that the feature shown is unintended or unexplained in the specification. The drawings must be evaluated for what they reasonably disclose and suggest to one of ordinary skill in the art. *In re Aslanian*, 590 F.2d 911, 200 USPQ 500 (CCPA 1979)”.

Therefore, the examiner must interpret figure 4 for what it reasonably discloses and suggests to one of ordinary skill in the art and the fact that it is unintended and unexplained in the specification is immaterial. One of ordinary skill in the art would reasonably understand figure 4 to show four equally spaced rotating nozzles having angles of inclination in the radially outward direction (see left and right nozzles) and the circumferentially forward direction (see middle two nozzles) while the nozzles spray with a jet opening angle. One of ordinary skill in the art could not readily adduce the values of the angles shown but the existence of the angles is readily apparent.

d. Moreover, the lack of “written description” argument asserted by the applicant is unpersuasive on two grounds. First, MPEP 2125 explicitly states that it is immaterial whether the feature shown is unintended or unexplained in the specification. Second, one may show possession of an invention by disclosure of drawings or structural chemical formulas that are sufficiently detailed to show

that applicant was in possession of the claimed invention as a whole. *Vas-Cath, Inc. v. Mahurkar*, 935 F.2d at 1565, 19 USPQ2d at 1118 ("drawings alone may provide a 'written description' of an invention as required by Sec. 112\*").

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher M. Koehler whose telephone number is (571)272-3560. The examiner can normally be reached on Mon.-Fri. 7:30A-4:00P.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David P. Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jermie E Cozart/  
Primary Examiner, Art Unit 3726

/C. M. K./  
Examiner, Art Unit 3726